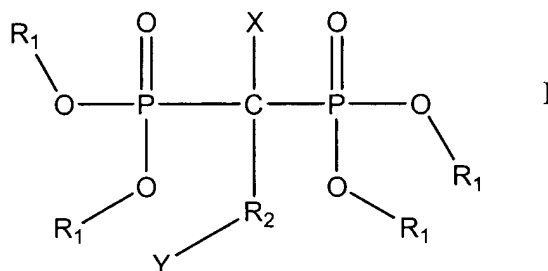


CLAIMS

What is claimed is:

1. A sustained release composition comprising a biocompatible, biodegradable polymer having incorporated therein a bisphosphonate compound of Formula I
 5 or a pharmaceutically acceptable salt thereof:



wherein,

R₁ is independently, H, alkyl, aryl or heteroaryl;

X is H, -OR₁ or halogen;

- 10 R₂ is H, O, S, N, (CH₂)_n, branched alkylene, branched or straight alkenylene or alkynylene;

n is an integer from about 0 to about 18;

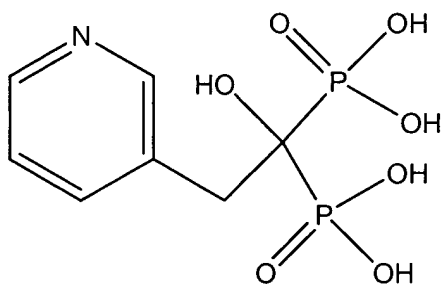
Y is H, R₁, halogen, amino, cyano or amido group; and wherein the composition is in the form of a microparticle.

- 15 2. The sustained release composition of Claim 1, wherein the biocompatible, biodegradable polymer is selected from the group consisting of: poly(lactides), poly(glycolides), poly(lactide-co-glycolides), poly(lactic acid)s, poly(glycolic acid)s, polycarbonates, polyesteramides, polyanhydrides, poly(amino acids), polyorthoesters, poly(dioxanone)s, poly(alkylene alkylate)s, copolymers or
 20 polyethylene glycol and polyorthoester, biodegradable polyurethane, blends

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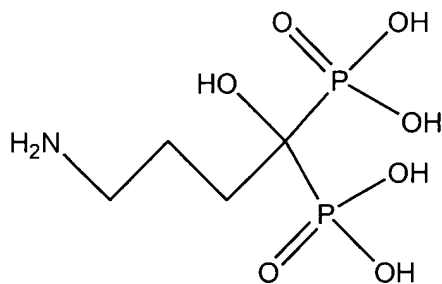
thereof, and copolymers thereof.

3. The sustained release composition of Claim 1, wherein the bisphosphonate compound has the following structure:



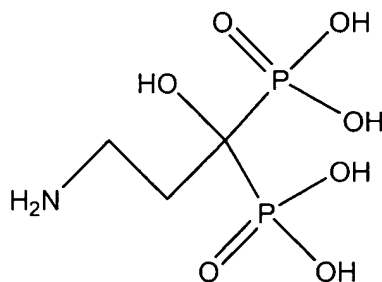
- 5 or a pharmaceutically acceptable salt thereof.

4. The sustained release composition of Claim 1, wherein the bisphosphonate compound has the following structure:



- 10 or a pharmaceutically acceptable salt thereof.

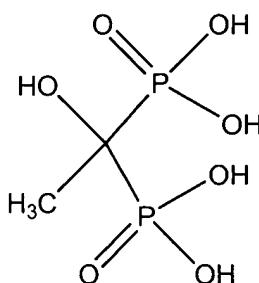
5. The sustained release composition of Claim 1, wherein the bisphosphonate compound has the following structure:



or a pharmaceutically acceptable salt thereof.

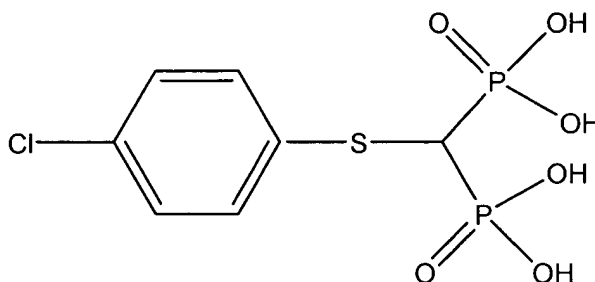
5

6. The sustained release composition of Claim 1, wherein the bisphosphonate compound has the following structure:



or a pharmaceutically acceptable salt thereof.

7. The sustained release composition of Claim 1, wherein the bisphosphonate compound has the following structure:



or a pharmaceutically acceptable salt thereof.

- 5 8. The sustained release composition of Claim 1, wherein the bisphosphonate is present from about 0.5% (w/w) to about 20% (w/w) of the total weight of the composition.